

2/28/2011
jasbrown

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STATE
GA

PROJECT NUMBER
BRST0-2938-00 (004)

SHEET NO.
161

TOTAL SHEETS
188

Sta 11:00 CR 10 Left: A Sediment Basin Is not used at this location. The disturbed area within the drainage area is 0.1 Acres. The disturbance activities consist of clearing and grading. BMP's as shown on the erosion control plans will be adequate to control sediment runoff at this location. Land disturbance activities associated with constructing and removing a sediment basin at this location would cause additional adverse impacts.

SILT FENCE INSTALLATIONS WITH J-HOOKS AND SPURS

The following table summarizes the required and available sediment storage for every outfall on this project. The Contractor shall provide and maintain the storage volumes for the BMPs specified in this table.

SEDIMENT STORAGE INFORMATION

Drainage Area ID	Drainage area (acres)	Outfall ID	Outfall location	Disturbed Area (acres)	Required Sediment storage Volume (yd ³)	Check Dam			Silt Fence Storage Volume			INLET SEDIMENT TRAPS			Total Storage Volume Provided (yd ³)
						# of devices	Storage volume per ditch check (V from below)	Total Storage Volume Provided (CU YD)	# of devices (LIN. FT.)	Sediment Storage Each (LIN. FT.)	Total Storage Volume (CU YD)	# of devices	Sediment Storage Each (CU YD)	Total Storage Volume (CU YD)	
DRAINAGE AREA #1	2.35	BASIN 1	DITCH - STA 24+00 TO 30+24 LT OF SR 83	1.19	79.73	20	4.25	85.00							85.00
			SHEET FLOW - STA 30+24 TO 32+50 LT OF SR 83	0.51	34.17				226	0.345	77.97				77.97
	0.64	BASIN 2	DITCH - STA 32+50 TO 35+00 LT OF SR 83	0.65	43.55	3	15.95	47.85							47.85
			DITCH - STA 10+25 TO 12+00 RT OF CR 10	0.23	15.41	5	3.11	15.55							15.55
DRAINAGE AREA #2	0.61	BASIN 3	SHEET FLOW - STA 12+00 TO 15+00 RT OF CR 10	0.41	27.47				300	0.345	103.50				103.50
			DITCH - STA 10+25 TO 11+00 LT OF CR 10	0.08	5.36	3	2.22	6.66							6.66
	0.57	BASIN 4	SHEET FLOW - STA 11+00 TO 15+00 LT OF CR 10	0.53	35.51				400	0.345	138.00				138.00
			DITCH - STA 36+00 TO 44+00 LT OF SR 83	0.57	38.19	6	4.39	26.34	45	0.345	15.52	2	0.71	1.42	43.28
DRAINAGE AREA #3	0.59	BASIN 5	DITCH - STA 44+00 TO 47+50 LT OF SR 83	0.47	31.49	8	3.94	31.52							31.52
			DITCH - STA 1+00 TO 2+50 LT OF CR 226	0.12	8.04	1	41.29	41.29							41.29
N/A	2.87	BASIN 6	DITCH - STA 24+00 TO 32+50 RT OF SR 83	1.77	118.59	28	4.57	127.96							127.96
			SHEET FLOW - STA 32+50 TO 35+00 RT OF SR 83	1.10	73.70				250	0.345	86.25				86.25
N/A	2.23	BASIN 7	DITCH - STA 36+00 TO 47+50 RT OF SR 83	2.23	149.41	23	6.86	157.78							157.78

The sediment storage volume listed above is provided by the existing & proposed ditch section.

DERIVATION OF STORAGE CALCULATIONS

$$V \text{ (yd}^3\text{)} = \frac{1}{81} \left(h \left(\frac{(b_2 * (\frac{1}{s_1} * \frac{1}{s_2})) (h)) * b_2}{2} \right) \right) \left(\frac{h}{s_0} * x \right)$$

Segment	Longitudinal slope	Height of ditch check	Front Slope	Back Slope	Ditch Width	Distance the sediment can be stored beyond the ditch check	Storage Volume per ditch check	
	%							Ft.
	S ₀							h
STA 24+00 TO 30+24 LT OF SR 83	0.049	1.30	0.25	0.50	4.0	7.0	4.25	
STA 32+50 TO 35+00 LT OF SR 83	0.008	1.15	0.25	0.50	4.0	7.0	15.95	
STA 10+25 TO 12+00 RT OF CR 10	0.147	1.60	0.25	0.50	4.0	7.0	3.11	
STA 10+25 TO 11+00 LT OF CR 10	0.124	1.30	0.25	0.50	4.0	7.0	2.22	
STA 36+00 TO 44+00 LT OF SR 83	0.047	1.30	0.25	0.50	4.0	7.0	4.39	
STA 44+00 TO 47+50 LT OF SR 83	0.054	1.30	0.25	0.50	4.0	7.0	3.94	
STA 1+00 TO 2+50 LT OF CR 226	0.003	1.15	0.25	0.50	4.0	7.0	41.29	
STA 24+00 TO 32+50 RT OF SR 83	0.068	1.50	0.25	0.50	4.0	7.0	4.57	
STA 36+00 TO 47+50 RT OF SR 83	0.045	1.55	0.25	0.50	4.0	7.0	6.86	

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GEORGIA
DEPARTMENT
OF
TRANSPORTATION

REVISION DATES

02-10-11		

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: DISTRICT 2 TENNILLE
ESPCP GENERAL NOTES
SR 83/BOSTWICK HWY OVER LITTLE SANDY CREEK
PROJECT BRST0-2938-00 (004)
COUNTY MORGAN

DRAWING No.
51-02